CLAIMS

What is claimed is:

1   1.   A media adapter for coupling a networking device to a power line, the

2   media adapter comprising:

3   a physical layer to be coupled to the power line;

4   a medium access control (MAC) layer in communication with the physical

5   layer; and

6   an inter-working unit in communication with the MAC layer, the inter-working

7   unit to translate information from a first format into a second format differing from the

8   first format to enable information to be received and transmitted over the power line.

1   2.   The media adapter of claim 1, wherein the power line is electrical wiring

2   supporting an alternating current.

1   3.   The media adapter of claim 1, wherein the inter-working unit translates

2   voice routed over at least one HomePlug frame into audio signals recognized by a Plain

3   Old Telephone System (POTS) interface.

1   4.   The media adapter of claim 1, wherein the inter-working unit translates

2   data routed over at least one HomePlug frame into data placed in an Ethernet frame.

1   5.   The media adapter of claim 4, further comprising a medium access

2   control (MAC) layer and a physical layer to support Ethernet-based communications.

1   6.   The media adapter of claim 5, further comprising an access point

2   coupled to the physical layer supporting Ethernet-based communications, the access

3   point to transmit signal to the networking device over a wireless communication path.

1   7.   The media adapter of claim 1, wherein the inter-working unit translates

2   voice routed over at least one HomePlug frame into radio frequency signals transmitted

3   by a transceiver integrated within the media adapter.

1   8.   A network comprising:

2   an alternating current (AC) power line;

3   a gateway in communication with the AC power line, the gateway including a

4   first inter-working unit to translate information of a first format received from a remote

5   source into information of a second format configured for transport over the AC power

6   line; and

7   a media adapter in communication with the AC power line, the media adapter

8   including a second inter-working unit to translate the information of the second format

9   into information of a third format.

1   9.   The network of claim 8, wherein the information of the first format is

2   data transmitted over any type of Digital Subscriber Line (xDSL).

1   10.   The network of claim 9, wherein the information of the second format is

2   data transmitted through one or more HomePlug frames.

1   11.   The network of claim 10, wherein the information of the third format is

2   data transmitted in accordance with an Ethernet format.

1   12.   The network of claim 8, wherein the first inter-working unit is software

2   executed by a processor that translates extracts payload data from a HomePlug frame

3   and produces a packet for transmission in accordance with a Wireless Local Area

4   Network (WLAN) standard.

1   13.   A method comprising:

2   receiving at least one frame containing information transmitted over a power

3   line;

4   extracting information from the frame, the information being in a first format;

5   translating the information from a first format into a second format; and

6   transmitting the information having the second format to a networking device.

1   14.   The method of claim 13, wherein the frame is a HomePlug frame.

1   15.   The method of claim 13, wherein the information is voice.

1   16.   The method of claim 13, wherein the information having the second
2   format is at least one Ethernet packet that differs in data structure from the information
3   having the first format.

1   17.   The method of claim 13, wherein the information having the second
2   format is radio frequency (RF) signaling that differs in data structure from the
3   information having the first format.

1   18.   The method of claim 13, wherein the power line is alternating current
2   electrical wiring.

1   19.   A software stored in a machine readable medium for execution by a
2   processor, the software module comprising:
3   a first software module to recover information from an incoming frame routed
4   over a power line, the information being in a first format;
5   a second software module to translate multiple types of information from a first
6   format into a second format; and
7   a third software module to transmit the translated information having the second
8   format to a networking device.

1   20.   The software of claim 19, wherein the second software module is
2   adapted to translate both (i) data and (ii) voice carried over the power line.